COMMENTS SUBMITTED IN RESPONSE TO:

Wireless Telecommunications Bureau Seeks Comment on the State of Mobile Wireless Competition

WT Docket No. 11-186

Federal Communications Commission

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Submitted by

The NPD Group, Inc
Port Washington, NY

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I. Introduction

In response to Public Notice WT Docket No. 11-186, The NPD Group requests that the Commission take into consideration NPD's Connected Intelligence, Mobile Phone Track and Smartphone Track product offerings as sources of information for the Sixteenth Report. These products serve as a vital source of information for private sector telecom organizations, and can also serve to enrich the Commission's understanding of Mobile Wireless Competition in United States.

The NPD Group is the leading provider of reliable consumer and retail information for organizations that rely on it to guide critical strategic and tactical decisions across international and local markets. Government agencies utilize NPD's consumer information to understand social trends, monitor economic indicators, create targeted communications that reach particular demographic groups, and evaluate public programs. NPD's public sector specialists assist government agencies by quickly locating timely data, interpreting it, and demonstrating how it may be applied it to critical decisions, while being mindful of process and budget constraints.

This response will begin with a description of NPD's product offerings that cover the mobile wireless industry, followed by direct answers to questions the Commission has posed.

Further information is available to specific questions. Please contact Aaron Heffron (Aaron.Heffron@NPD.com) with additional questions.

II. Data Sources/Documentations

Mobile Phone Track/Smartphone Track

The NPD Mobile Phone and Smartphone Tracking tools provide monthly tracking of the mobile phone industry at the model/device level in terms of units, dollars and average sales price (ASP). Model detail includes what phone models/brands are selling, at what retailers/carriers, and why are people buying them.

Both services are available through a single data mining tool, and supported by a client service team with mobile phone industry experience. Data is also available via single, ad hoc requests upon request.

The Mobile Phone Track data set includes a robust sample of model level transaction data including the following:

Mobile Phone Track:

- Monthly model specific units, dollars (volumes and shares), Average Sales Price (ASP)
- Complete US wireless carrier coverage
- Complete US retailer outlet coverage
- Over 50 device attributes
- Consumer purchasing behaviors
- Accessories attachment
- Voice, data and hot-spot plan attachment
- 4,000-6,000 monthly transaction based on 30-day recall
- Balanced, weighted and projected to the US adult population

Smartphone Track:

- Smartphone-specific consumer purchasing behaviors
  - 1rst-time smartphone buyer versus upgrader
  - Consumer loyalty to Operating System (OS) and brand
  - Conversion from consideration to purchase
  - Price Sensitivity
- Fully integrated with Mobile Phone Track to enable data analysis across all fields

Handset Tracking Services:

- Model detail (iPhones vs. Curve vs. Droid)
- Brand data (Motorola vs. LG)
- Retailer level data (Verizon Stores vs. Best Buy)
- Carrier level data (AT&T vs. Verizon)
- Why behind the buy-model and retailer selection
- Calling plan type (Prepaid vs. Postpaid)
- Reasons for switching carriers or brands
- Previous device details- length of ownership, brand & device type (Smartphone, etc.)
- Competitive shopping set – operating system, brands, price range
- Accessories/Market basket
- Regional data (Census, State and DMA)
- Handset attributes (40+) – smartphone, GPS, Bluetooth etc.
- Buyer demographics & profiles

Mobile Phone Track Special Reports:

- Mobile Phone Quarterly Highlights: Provides a top level overview of the Mobile Phone industry on a quarterly basis.
- Wireless at Retail: Tracks the Mobile Phone industry through the "big three" non-carrier retailers (Walmart, Best Buy, and Radio Shack).
- Smartphone Buyer Report: Tracks sales of smartphones on a quarterly basis, including top models and attributes with a deeper dive into the purchase process with device switching; top reasons for buying a smartphone as well as plan and accessory attachment.

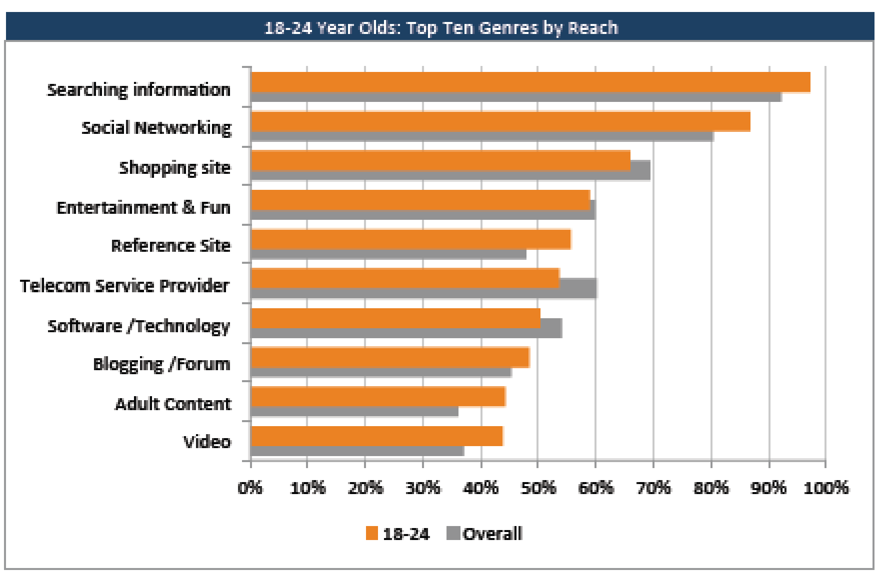
Connected Intelligence

NPD Connected Intelligence provides the insight, analysis and data that is necessary to understand today's revolutionary new connected marketplace. NPD Connected Intelligence is backed by an experienced team of analysts that features deep industry expertise on devices, services and content. Their unique insight and unparalleled expertise helps clients gain a complete understanding of the evolving connected marketplace.

NPD Connected Intelligence tracks the mobile data market in the following ways:

Key Data Sources:

- Monthly tracking of the mobile broadband plans that are available for purchase, including features and pricing.
- Bi-annual survey that looks at consumers' current connectivity across devices (e-Reader, notebook, tablet, hotspot and others).
- Quarterly calculations of the data Average Revenue Per User (ARPU) and other performance indicators for the top four mobile carriers.
- Quarterly estimates for the number of devices connected to a cellular network; broken out by carrier and by device type (hotspot, USB Modem, embedded tablet and embedded notebook, including forecasting.
- On device metering of broadband consumption by smartphone users. This is broken down by 2G, 3G 4G and Wi-Fi. It can be used as means to examine the amount of data consumed by smartphone users on cellular networks and Wi-Fi offload.
    - On device metering of applications downloaded and used and web sites visited each month via NPD's SmartMeter. The SmartMeter solution is an application that resides on smartphones. Participants using the SmartMeter are opt-in panelists who are provided an incentive to maintain their use of the SmartMeter. The SmartMeter provides details of broadband use (by radio type) as well as application use and downloads, website access and other communication-based activities on the phone. Data is tracked on a daily basis and reported monthly. Sample SmartMeter website access data (December 2011):



Key Analytical Sources:

- Access Reports: Examine how bandwidth and services will continue to drive consumers' appetite for more complex content and applications. Examples include:
    - *Access Availability Summary Report: Monthly Summary of Broadband Plan Changes*
    - *Access Adoption and Intent Report: An In-Depth Look at US Consumer Mobile Broadband Trends*
    - *Smartphone Broadband Usage Report: Monthly Analysis of Mobile Broadband Use by Android Smartphone Users*

- Devices Reports: Cover internet-connected devices and how they drive consumer usage and purchasing behavior. Provide a greater understanding of product availability and innovation as well as consumer adoption and application. Examples include:
    - *Device Adoption Report: US Consumer Connected Devices Trends*
    - *Android: Variation and Value-Add*
    - *Mobile Device Availability Tracker*

- Content Reports: Apps and services continue to drive how and why consumers connect. Content reports provide insight into the evolving content platforms that will drive connectivity. Examples include:
    - *Tablets: Resizing the Smartphone, Redefining the Notebook, Innovation Inflection Report*
    - *Broadband Video: On Demand, On the Go and On the Rise*
    - *Smartphone Application Report: Tracking Application Adoption and Use on Android Smartphones*

III. Responses to Questions posed by the Commission

Responses to Questions posed by the Commission

The combination of raw data and industry analysis produced by the NPD Group provides insight into the Mobile Wireless marketplace in a general sense, as well as providing direct answers to the Commission's questions included in the Public Notice. Below is a listing of direct answers to The Commission's questions that the NPD Group submits for consideration:

"*In particular, the Bureau seeks comment and information on trends related to the pricing of mobile data and Internet access services offered by mobile wireless service providers. We request data on the pricing of these services on a national or sub-national level.:"*[1]

The NPD Group Connected Intelligence product suite can provide mobile broadband pricing data on a monthly basis, trended for the past 15 months. All mobile carrier data plans are tracked, including those aimed at smartphones, tablets, mobile data devices (hotspots) and embedded laptops.

"Have the ways in which providers' price mobile data and Internet access services changed in 2010 and 2011?"[2]

"Unlimited" plans have effectively disappeared. Of the four major carriers, Sprint is the only that still sells an "unlimited" plan. While the legacy plans are still technically unlimited, they are throttled to slower speeds. (see also[3] and[4])

"In particular, to what extent are providers offering tiered rather than unlimited data plans for certain devices, and how has this affected competition in the industry?"[5]

Tiering of data plans has certainly increased due to bandwidth concerns (NPD also tracks actual data usage on smartphones), particularly for smartphone plans. Mobile Hotspot plans have always kept a tiered approach. In many respects, this tiered approach increases competition as there is more room for providers to gain a competitive advantage through pricing changes, or bundling data plans with other services.

"How are providers pricing mobile Internet access services for non-voice devices such as tablets, e-readers, laptops, and modem cards, and how has this changed in the past year?"[6]

Tiered pricing. The pricing remains relatively consistent over the past year. Carriers are attempting to increase the data bucket tiers a little higher, for example AT&T replacing the 2GB plan point with 3GB (for an increased fee).

"Are there any reports or analyses that discuss pricing trends for mobile data services?"[7]

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[1] WT Docket No. 11-186 Section II. Mobile Wireless Services: Provider Conduct A. Price Rivalry
[2] Ibid
[3] The NPD Group Blog. (2012, March 5). Throttling Smartphone Users. http://www.npdgroupblog.com/2012/03/throttling-smartphone-users/
[4] The NPD Group Blog. (2011, July 7). Data Cap Reality. http://www.npdgroupblog.com/2011/07/data-cap-reality/
[5] WT Docket No. 11-186 Section II. Mobile Wireless Services: Provider Conduct A. Price Rivalry
[6] Ibid
[7] Ibid

Yes, NPD Connected Intelligence produces ongoing coverage of the mobile data market including forward-looking reports that examine what we expect to happen in the near future for plan types. (see also[8])

"How have such trends affected mobile data subscribership and use?"[9]

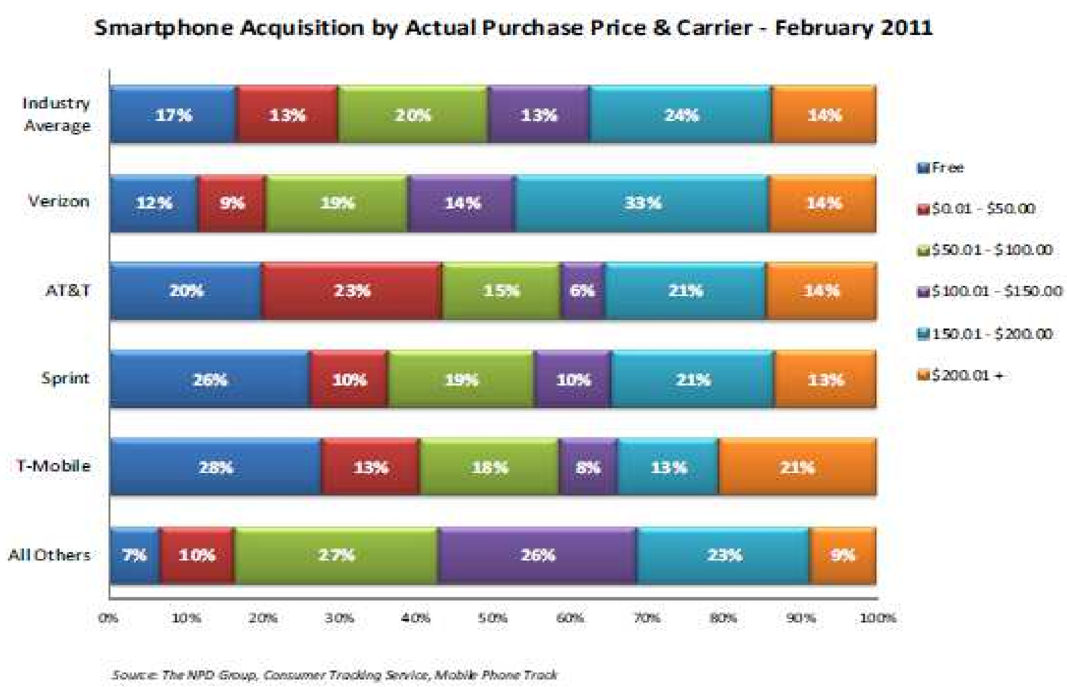
Smartphone users have zero choice. Consumers cannot buy a smartphone without subscribing to a data plan. This rule even applies if consumers purchase an unsubsidized smartphone. However, the pricing structures overall has led to very limited appeal for mobile data connections for tablets and embedded PCs within the consumer market. Connected Intelligence analysts have determined that almost 70% of tablet users now rely on Wi-Fi only connections, rather than cellular connections, up from 60% one year ago.

"What role does handset and device pricing play in mobile wireless competition?"[10]

Pricing over the past few years has narrowed, and effectively $199 is the top range cap (there are some exceptions). This has meant that the range of price for differentiation is more limited. Connected Intelligence analysts have found that pricing is not the singular driver of competition, the mix of handsets available on each network provide differentiation and play a major role in competition.

"Do providers engage in rivalry via handset and device pricing?"[11]

Yes, pricing and availability of devices is a major area of competition for providers. The handset is the eye-candy of the mobile market. The graph below serves as an example of NPD's ability to dissect handset pricing and availability by carrier. [12]



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[8] The NPD Group Blog. (2012, January 19). AT&T Shakes Up Data Plans, But At What Cost?. http://www.npdgroupblog.com/2012/01/att-shakes-up-data-plans-but-at-what-cost/#more-1601

[9] WT Docket No. 11-186 Section II. Mobile Wireless Services: Provider Conduct A. Price Rivalry

[10] Ibid

[11] Ibid

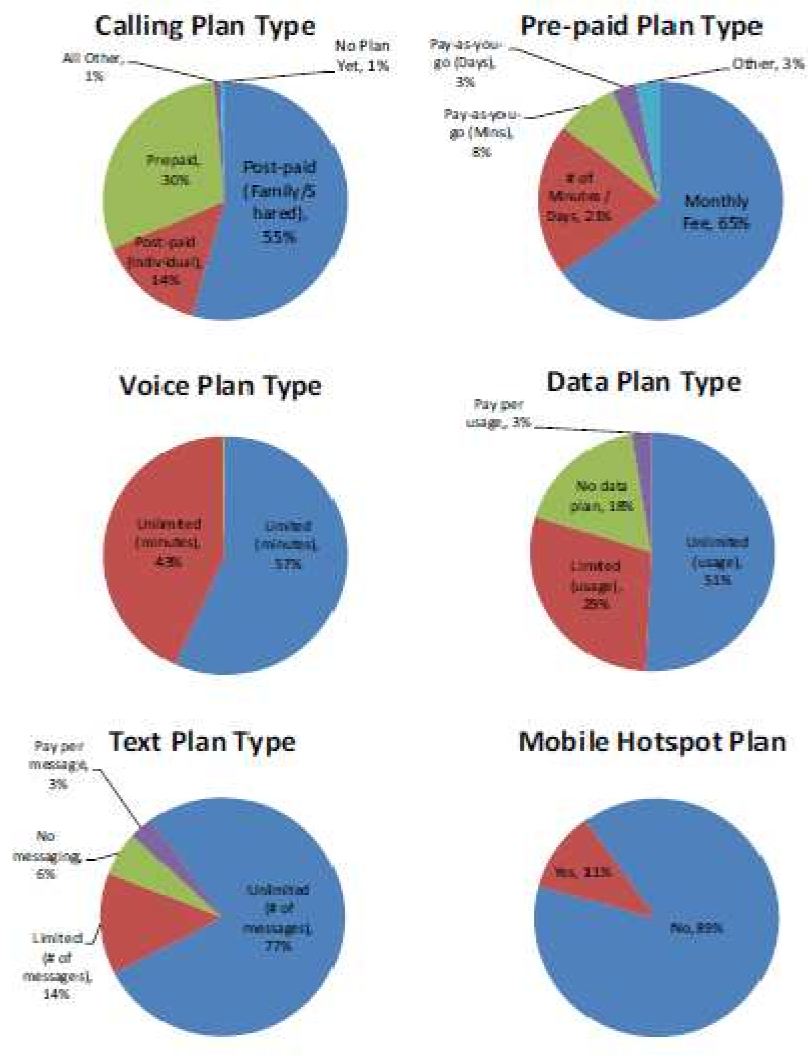
[12] The NPD Group, Consumer Tracking Service, Mobile Phone Track February 2011.

"Are there sources that can provide data on the number of devices that are used for mobile broadband or data services exclusively or in conjunction with mobile voice services?"[13]

Yes, NPD Connected Intelligence tracks embedded PC, tablet, hotspot and USB Modem subscriptions on a quarterly basis. In addition NPD Connected Intelligence produces forecast reports for these categories.

"*Are there additional sources that the Commission should use to analyze mobile wireless subscribership?"*[14]

The NPD Group Mobile Phone Track and Smartphone Track monitor mobile wireless subscribership by plan type, with a reporting on a monthly basis. The chart below is an example of six months of subscribership data ending February 2012[15].



Source: The NPD Group, Consumer Tracking Service, Mobile Phone Track, 6ME February 2012

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[13] WT Docket No. 11-186 Section III. Mobile Wireless Services: Performance. A. Subscribers.

[14] Ibid

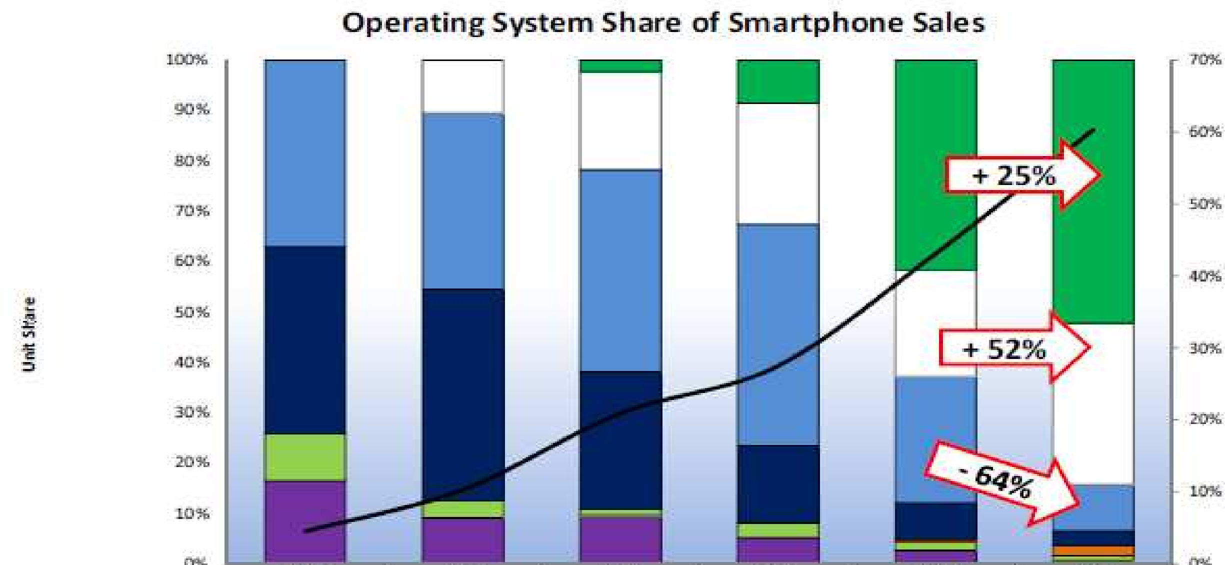
[15] The NPD Group, Consumer Tracking Service, Mobile Phone Track, 6ME February 2012.

"We ask also for any data on mobile data traffic by type of device, by type of subscription, by age group, and on a sub-national basis."[16]

NPD Connected Intelligence tracks actual data consumption for Android smartphones. The NPD Group plans to expand to include iPhone and tablets in near future to provide a more comprehensive view of the market.

"The Bureau invites commenters to submit data and information on the mobile wireless device and operating system sectors of the mobile wireless ecosystem."[17]

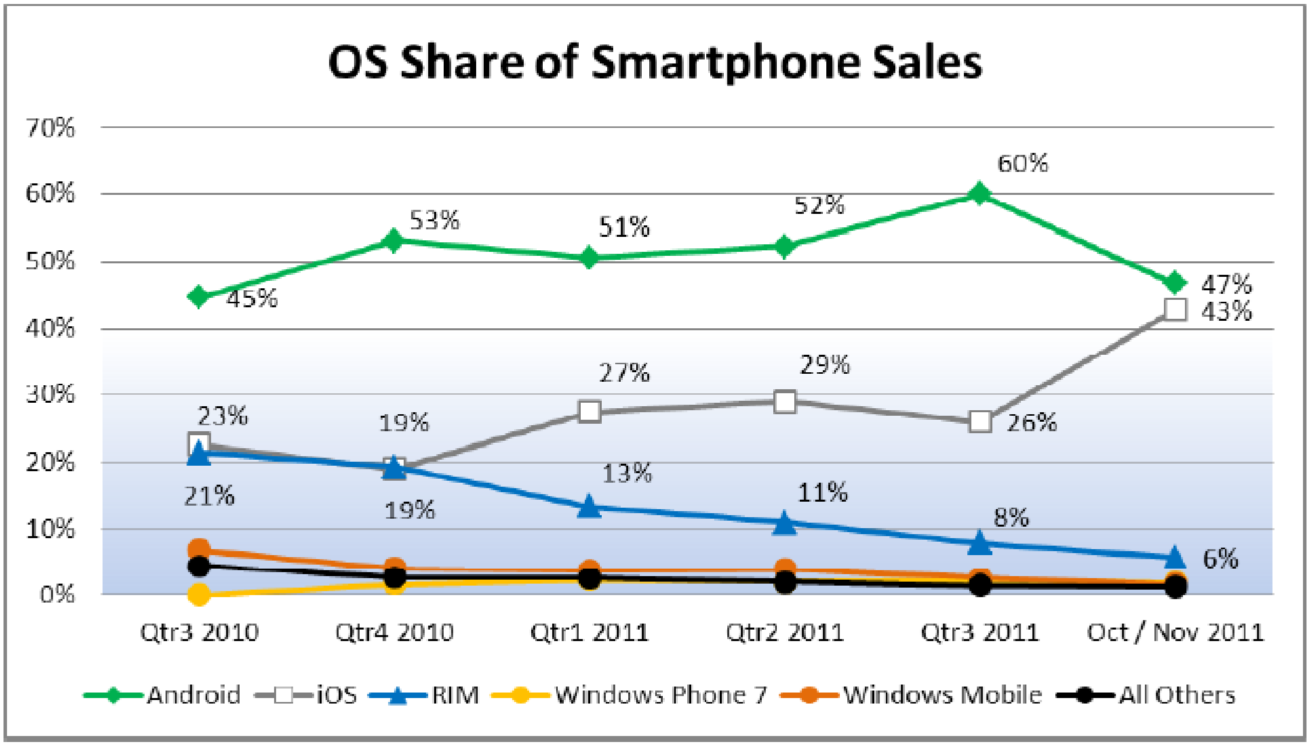
The NPD Group submits the following charts as an example of merits of NPD's Mobile Phone Track as a source of data for the Commission. These charts illustrate NPD's tracking of operating system share of smartphone sales from 2006 through 2011, as well as a detailed breakdown from 2010 through 2011.[18] The initial chart shows decline of the RIM operating system (negative 64%), as well as the rise of the Android and iOS operating systems as the dominant operating systems in the United States, with growth of 25 and 52 percent respectively since 2006.



	2006	2007	2008	2009	2010	2011
Android	0%	0%	2%	9%	42%	52%
iOS	0%	11%	19%	24%	21%	32%
RIM	37%	35%	40%	44%	25%	9%
Windows Mobile	37%	42%	27%	15%	7%	3%
Windows Phone	0%	0%	0%	0%	1%	2%
Symbian OS	9%	3%	1%	3%	2%	1%
Palm / Web OS	17%	9%	10%	5%	3%	1%
Smartphone Share of Sales	5%	10%	21%	28%	43%	60%

Source: The NPD Group, Consumer Tracking Service, Mobile Phone Track

[16] WT Docket No. 11-186 Section III. Mobile Wireless Services: Performance. A. Output and Usage Levels.
[17] WT Docket No. 11-186 Section V. Input and Downstream Segments of the Mobile Wireless Ecosystem. B. Downstream Segments. 1. Handsets/Devices and Operating Systems.
[18] The NPD Group, Consumer Tracking Service, Mobile Phone Track.



Source: The NPD Group, Consumer Tracking Service, Mobile Phone Track

"The Bureau invites commenters to submit data and information on the applications sector of the mobile wireless ecosystem." [19]

NPD Connected Intelligence tracks application downloads and use on smartphones via on-device metering (SmartMeter). This level of data collection provides a clear view of which apps are being used, how often, and for how long.

"Mobile wireless technologies appear to play an increasingly significant role in providing broadband services. To what extent do mobile broadband services complement or compete with broadband services offered over wireline technologies such as DSL, cable, or fiber to the home? To what extent are consumers substituting fixed with mobile data usage for certain functions and applications, such as web browsing, e-mail, and accessing social networking sites? What factors – such as price, coverage, uplink and downlink speeds, equipment, and bundling – influence the extent to which mobile broadband services compete with wireline broadband services?"[20]

In general, mobile broadband data plans are not yet mature enough to compete with mass-market broadband to the home. Mobile data plans are (almost) all tiered plans, while broadband to the home is typically a flat-fee, unlimited service. Home-providers differentiate tiers of plan based on speed, rather than capping bandwidth (although some cable companies are still experimenting with tiering). The ability of mobile solutions to compete in the home depends on the options available (competition), as well as what consumers need the connection for: if they are streaming video content (OTT) then mobile is not going to provide enough bandwidth (and cap). However, we are starting to see a younger audience rely more heavily on mobile data in the home, watching video via tablets and smartphones. This

[19] WT Docket No. 11-186 Section IV. Consumer Behavior in the Mobile Wireless Market. B. Downstream Segments. 2. Applications.
[20] WT Docket No. 11-186 Section VI. Intermodal Competition. A. Competition in Voice Services.

topic was examined in-depth in NPD's *Broadband TV Innovation Report* published in October 2011, which looks at customer satisfaction for home connectivity as well as mobile.

"In addition, are data available, on the number of connections broken down by mobile network technologies, such as EV-DO, HSPA, Wimax, and LTE?"[21]

NPD Mobile Phone Track monitors the adoption of mobile network technologies. For example recent Mobile Phone Track data shows that the fourth-generation (4G) smartphone market grew from 6 percent in the fourth quarter (Q4) of 2010 to 35 percent in Q4 2011. The most popular 4G network technology in smartphones was HSPA+, at 22 percent of smartphone sales. LTE-enabled handsets accounted for 7 percent of the smartphone market. 26 percent of consumers who purchased LTE phones were specifically seeking 4G technology in 2011, compared to just 9 percent of all smartphone buyers. The percentage of smartphones supporting WiMax, the LTE alternative launched by Sprint in the summer of 2009, ended the year at 6 percent of the market after hitting a high of 10 percent in the third quarter of 2011. [22]

"Some mobile wireless service providers use Wi-Fi hot spots to supplement or complement their mobile voice and data offerings provided through the licensed use of spectrum. To what extent are mobile wireless providers using Wi-Fi to offload data traffic or for other purposes? Is data available on the percentage of smartphone or tablet data traffic that travels over Wi-Fi? Have new services or applications that integrate both mobile wireless and Wi-Fi networks been launched in the past year? To what extent is Wi-Fi being used to provide location-based services?"[23]

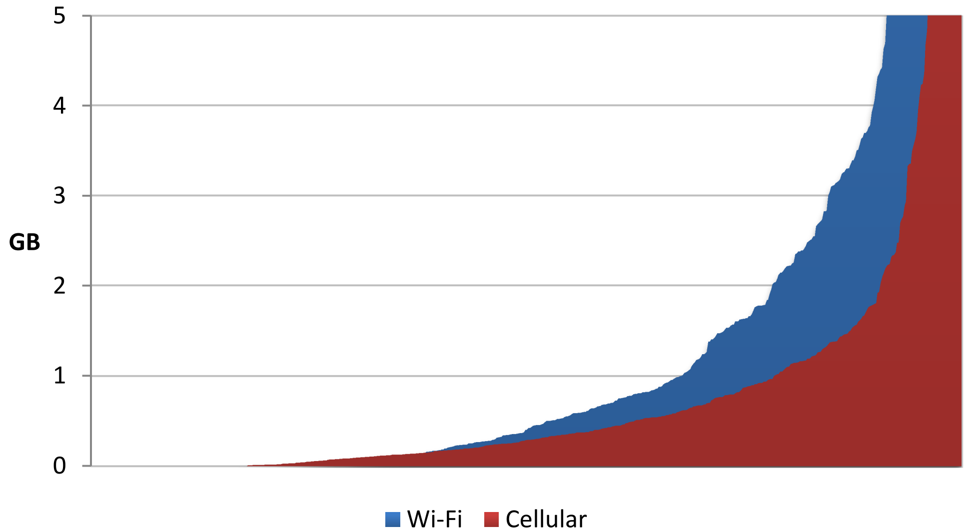
NPD Connected Intelligence tracks Wi-Fi offload for smartphone users. This is not just a percentage of users, but the amount of data consumed. Below is an example chart looking at February 2012 data traffic.[24] The horizontal axis is the smartphone subscribers from 0% to 100% of subscribers tracked, while the Y – vertical – axis shows the number of GB consumed. The data shows that the vast majority of current Android users use far less that 2GB of cellular data. Note, there is not a one-to-one relationship between the Wi-Fi and cellular data. Each data set is ordered from smallest to largest to show to overall data use across the subscriber base. As such, it is not accurate to assume that a large cellular user is also a large Wi-Fi user. A more direct comparison can be provided through the content, of so required.

[21] WT Docket No. 11-186. Section III. A. Subscribers.

[22] The NPD Group Press Release. March 13, 2012. 4G Handsets Grew to Encompass over One-Third of the Smartphone Market in 2011. https://www.npd.com/wps/portal/npd/us/news/pressreleases/pr_120313.

[23] WT Docket No. 11-186 Section VI. Intermodal Competition. C. Wireless Local Area Networks.

[24] NPD Connected Intelligence.



The data gathered allows NPD to break down traffic use by carrier as well to provide greater clarity into the data use (cellular vs. Wi-Fi) for the major carriers.